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Code-breaker: Developing phonics with a young adult with an intellectual disability

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Three key strategies and practical teaching approaches help a young man with Down syndrome.

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There are many challenges for teachers in Australia in developing the literacy skills of young adults with intellectual disabilities such as Down syndrome. First, there are limited opportunities for continuing education for young adults with intellectual disabilities once they leave school. This is so despite research suggesting that these young people continue to develop literacy learning into adolescence and beyond (Bochner, Outhred, & Pieterse, 2001; Fowler, Doherty, & Boynton, 1995; Moni & Jobling, 2001; Pershey & Gilbert, 2002; Young, Moni, Jobling, & van Kraayenoord, 2004). For example, one three-year study into the literacy learning of young adults with Down syndrome reported improvements across time in word recognition, reading fluency, comprehension, writing, spelling, and oral language (Moni & Jobling).

A second challenge lies in broadening the limited definitions of literacy that have informed literacy instruction for this population. Contemporary understandings of literacy recognize that in order to understand the world, learners need to engage with texts in print, oral, and multimedia domains in a wide range of contexts for different purposes. However, research has shown that for young adults with intellectual disabilities, these aspects of literacy engagement have largely been ignored, as a greater emphasis has been placed on vocational and daily living skills (Farrell & Elkins, 1991; Hedrick, Katims, & Carr, 1999).

Although there is increasing recognition that literacy instruction for learners with intellectual disabilities needs to encompass a wider repertoire of texts and practices than previously thought, there is limited information about the kinds of approaches and strategies that might be used to overcome this challenge (Moni & Jobling, 2000a; van Kraayenoord, Moni, Jobling, & Ziebarth, 2002; Young et al., 2004). For example, Kotula (2003) argued that selecting appropriate texts for learners with intellectual disabilities is difficult because of large discrepancies in age, interests, and reading ability. Often reading materials that are at an applicable instructional level do not have an appropriate interest level.

In this article, we provide first a rationale for the need to gather detailed information about the learner, about strategies to enhance motivation, and about developing a repertoire of multiple approaches and activities. We illustrate later how we used this knowledge in conjunction with the Four Resources Model (Freebody & Luke, 1990; Luke & Freebody, 1997) to integrate contemporary understandings about literacy practices with a literacy program that met the needs of a young adult with an intellectual disability.

Knowing the learner

As with all individuals, learners with intellectual disabilities will develop skills in phonics at differing rates and levels of knowledge, understanding, and application in reading and writing situations. Given the diversity of ability, range of experiences, and knowledge of these learners, it is important for teachers to gather detailed information about their abilities, needs, and interests using multiple pathways (Dalton, Tivnan, Riley, Rawson, & Dias, 1995; Moni & Jobling, 2001; Westwood, 1998). Formal assessments can provide teachers with a range of information about learners' abilities and areas of need that can assist in the development of appropriate programs and teaching strategies (Sigafoos & Arthur, 2002; Virgona & Greaves, 2001). However, research has shown that the methods teachers use to gather such information need to extend beyond formal testing to allow learners to demonstrate knowledge, abilities, and skills with materials they are familiar with, confident in using, and that are responsive to their learning needs (Campbell, 1997; Carothers & Taylor, 2003; Costa & Kallick, 1995; Culbertson & Jalongo, 1999; Kane, Khattri, Reeve, & Adamson, 1997; Mueller, Waters, Smeaton, & Pinciotti, 2001; Neuman, Copple, & Bredekamp, 2001; Westwood, 2001). Informal interviews and other informal data collection methods, undertaken within authentic literacy experiences, are useful ways of discovering the learners' interests, prior knowledge, and past experiences that can then be used in program planning. Such informal means of data collection promote positive learner–teacher relationships. The learners are placed in a position where there is recognition that they are experts about their lives, and the teacher is someone who is genuinely interested in finding out about them (Moni & Jobling, 2001).

Motivating the learner

Research has shown that reading success is also dependent upon the development of interest, positive attitudes, self-concept, and motivation (Calkins, 2001; Garrett, 2002; Tesser, Felson, & Suls, 2000). When learners are motivated they are more likely to persist at a given task. As a result, learning is more likely to occur as the initial motivation is generalized and extended to other content and texts (Guthrie, Alao, & Rinehart, 1997; Guthrie & Cox, 2001; Guthrie & Davis, 2003). When learners are not motivated, task persistence decreases, and as a result reading success is adversely affected (McKinney, Osborne, & Schulte, 1993). The challenge for teachers working with learners with intellectual disabilities lies in including content that is relevant, interesting, meaningful, and has some familiarity. Thus, the inclusion of real-world interactions and activities, which are relevant to the learners and enable them to feel connected to their world, is important to heighten motivation and engage them in learning (McCombs & Pope, 1994; Morgan & Moni, 2005; Pressley, Roehrig, Bogner, Raphael, & Dolezal, 2002; Westwood, 1998; Zahorik, 1996).

Using multiple approaches and activities

Explicit phonics knowledge, or a clear understanding of the alphabetic principle, develops from multiple and integrated approaches to phonics instruction (Villaume & Brabham, 2003; Westwood, 1997). Accomplished teachers integrate different teaching strategies and learner groupings with a variety of activities, materials, and games within authentic reading and writing situations. This allows multiple and varied opportunities for knowledge, understanding, and application of phonics to occur (Morgan & Moni, 2005; van Kraayenoord et al., 2002; Villaume & Brabham).

For learners with intellectual disabilities, there is a tendency for teachers to revert to rote learning and repetition. Nevertheless, skill-and-drill methods are not recommended as the sole strategy for use with individuals who are experiencing learning difficulties (Salinger, 2003; Whipp, 1994). These learners need a variety of

experiences and activities, as well as repetition, to enable them to learn.

The Four Resources Model

The Four Resources Model provides a principled, learner-centered approach for planning and teaching literacy that encompasses a broad understanding of literacy and moves beyond a single-method approach. The model describes a repertoire of literacy practices grouped into four main domains that represent resources learners can draw on to engage in texts. The first domain, *code-breaker*, foregrounds developing learners' understandings of letter–sound relationships, syntax, grammar, spelling, and conventions of texts. The second domain, *text participant*, emphasizes the roles of prior knowledge, relevance, and personal experience in constructing meaning from texts. *Text user* practices focus on recognizing genres and understanding how texts change depending on audience, context, and purpose. Finally, *text analyst* practices emphasize the ideological nature of texts and focus on reading, writing, viewing, and speaking critically.

This model has had widespread acceptance in Australian and many other educational contexts. Nevertheless, although this model has been used effectively to frame literacy instruction in many mainstream settings, its application to inclusive settings or in special education contexts has been limited. Next we describe how we used the Four Resources Model to frame the teaching of phonics in a literacy program for Gordon (pseudonym), a young adult with Down syndrome.

Developing our phonics program

All learners with intellectual disabilities develop literacy skills at differing rates and levels of knowledge, understanding, and application in reading and writing situations. In developing a balanced program for these learners, we believe it is important to adopt a teaching emphasis that pursues a developmental rather than a remedial approach to phonics instruction. The framework of the Four Resources Model and the repertoire of practices around code-breaking within the model allowed us to plan phonics-based strategies related to prior and current knowledge and abilities of our learner as a way of building on his strengths, rather than working from a deficit model. This approach recognizes that learners with intellectual disabilities bring some level of literacy to each learning experience. It is also acknowledged that for older learners, building upon their prior knowledge and existing abilities is more successful than the redundant repetition of basic skills (Salinger, 2003; Whipp, 1994).

Code-breaker is a key component in the model. It is only one part of the whole, but it is an equal and necessary contributor to a balanced literacy program. Studies have shown that although learners may learn to read without explicit knowledge of phonics, reading will be limited and unlikely to progress beyond an emergent level (Fowler et al., 1995). Furthermore, learners who have limited phonics and decoding skills will be more likely to experience difficulties in reading comprehension (Adams, 1990; Fowler et al.; Stanovich, 1991).

Findings from current practice in regular classrooms suggest that phonics instruction should be systematic, integrated, and use multiple approaches if learners are to develop explicit, systematic phonics knowledge (Villaume & Brabham, 2003; Westwood, 1997). In our experience, when working with young adults with intellectual disabilities, the term *systematic* needs to be reconceptualized. Although we acknowledge that teachers are systematically striving to assist learners to achieve explicit knowledge of phonics, the instruction of young adults with intellectual disabilities may not occur via a direct, inflexible, linear pathway because of the influence of a number of factors that affect learning. For example, cognitive processing difficulties may mean that a learner has difficulties responding to questions and in developing strategies to decode, read, and produce texts (Morgan, Moni, & Jobling, 2004).

Language skills also vary enormously and are often difficult to ascertain (Moni & Jobling, 2001). Some difficulties may be the result of cognitive processing limitations in problem solving or memory (McCowen, 1998), whereas others may be linked to limited opportunities for practicing skills (Farrell, 1996).

To explain this, imagine that the abilities and skills in phonics that learners bring to learning experiences are represented as a phonics jigsaw puzzle. For each learner, the puzzle will be different. Some puzzles will have many pieces. These pieces may be scattered across the board, showing some coherence and even the beginnings of a picture in some areas, but will be random scatterings in others. Some puzzles will have few pieces, and these may be scattered at random or clustered in small areas of the board. Still other puzzles may have only one or two pieces sitting randomly and alone on the board. The challenge for teachers is working out how to develop learners' phonics skills to fill in the missing pieces within the context of a balanced literacy program. This does not mean an "anything goes" approach but, rather, a contemporary approach to literacy learning that draws on the learner's interests, prior knowledge, and personal experiences while building upon existing literacy skills. Although this may be accepted practice in mainstream educational settings, it has not always been evident in literacy programs for adolescents and young adults with intellectual disabilities.

Next we describe the context of one literacy program in which this contemporary approach was implemented. We introduce Gordon and illustrate the strategies we used to develop phonics teaching and learning activities as part of a broad-based literacy program. Examples of activities designed for Gordon and samples of his work are included.

Teaching context

Gordon was attending a postschool literacy program that was developed for young adults with intellectual disabilities (see Moni & Jobling, 2000a, 2000b, 2001). It is based on contemporary understandings of literacy and is framed by the Four Resources Model. In this program, phonics teaching and learning have been developed and integrated into a range of literacy learning activities.

Gordon

Gordon is 17 years old and has Down syndrome. He attended a mainstream high school where he took part in regular classes in physical education, art, home economics, and drama. Literacy and numeracy were taught in a separate special education unit. The focus of literacy instruction was functional reading and writing. Learning activities were associated with reading community signs, shopping, cooking, and banking. In his leisure time Gordon played soccer, went to a youth group, and watched videos. Standardized assessments taken on his commencement in the postschool literacy program indicated that Gordon's age equivalent for receptive oral language, using the Peabody Picture Vocabulary Test–IIIA (Dunn & Dunn, 1997), was 6 years 5 months. Results from the Neale Analysis of Reading Ability (Neale, 1999) showed that Gordon's reading ages for accuracy, rate (fluency), and comprehension were 6 years 10 months, 8 years 6 months, and 7 years, respectively.

An informal interview was conducted to gather information about Gordon's interests, prior knowledge, personal experiences, and attitudes and behaviors related to literacy. An excerpt from this interview is presented in Table 1. From this interview we learned that Gordon had a pet dog called Blackie. We discovered that Blackie was a big, friendly black Labrador who was good at catching sticks, chasing footballs, and guarding the family. We learned that Gordon's interests included going on family picnics with his mother and father, playing soccer, cooking, listening to music, watching football with his father, playing tennis, and going to the movies. We learned about his favorite movie stars, music, and food. Furthermore, we discovered important aspects

Table 1
Excerpt from teacher interview with Gordon

Teacher:	I see you've brought a photo. Tell me about it.
Gordon:	This is at a picnic. There's dad, mum, and that's me.
Teacher:	What else is in the photo?
Gordon:	That's my dog called Blackie.
Teacher:	He looks like a great dog.
Gordon:	Yeah, he's a black Labrador. He guards us at home, but he's really just a big, old, friendly dog.
Teacher:	What are you doing in the photo?
Gordon:	Having a barbecue. Dad is good at cooking barbecues. I help him and I throw sticks for Blackie. He can catch them really high in his teeth. We play footy and soccer, and Blackie chases dad and tries to get the ball, but dad is a good kicker. But I'm a really good kicker and I get more goals than dad. Mum's not very good. Blackie always gets the ball off her.
Teacher:	What other things do you like to do?
Gordon:	I make good toffee, and popcorn, and milkshakes, and hamburgers.
Teacher:	You sound like a very good cook.
Gordon:	Yeah.
Teacher:	What's your favorite food?
Gordon:	Um, I really love Chinese food and pizza. We go to a Chinese restaurant, and it's really yum. I eat so much that I feel sick. I love noodles, too.
Teacher:	What other things do you like to do?
Gordon:	I like to listen to music on the radio. Britney is pretty hot. I've got her new CD.
Teacher:	Yes. I like her, too. What else would you like to tell me?
Gordon:	I like the Broncos, the Lions, and the Socceroos [Australian football teams]. Dad and I go to watch them play. I play tennis and go to movies with my friends.
Teacher:	Do you have a favorite movie or actor?
Gordon:	I like all the Arnie movies, but *Terminator*'s my favorite.
Teacher:	Do you like to read?
Gordon:	I don't really like reading books very much. I look at footy magazines. I like the action pictures of the players. Sometimes I read recipes with mum and dad.
Teacher:	I like reading recipes, too. You told me you like to make popcorn. Let's write a popcorn recipe together. Do you know what letter *popcorn* starts with?
Gordon:	I think a *p*?

about Gordon's literacy, specifically that Gordon enjoyed looking at football magazines and reading recipes but was reluctant to read books.

> Teacher: Do you like to read?
> Gordon: I don't really like reading books very much. I look at footy magazines. I like the action pictures of the players. Sometimes I read recipes with mum and dad.

Following this interview, we conducted an informal writing activity based upon some of the information gathered from the interview with Gordon. From this writing sample we established that Gordon had some knowledge of sound–symbol relationships and was beginning to apply this knowledge in his writing. (See Table 2.)

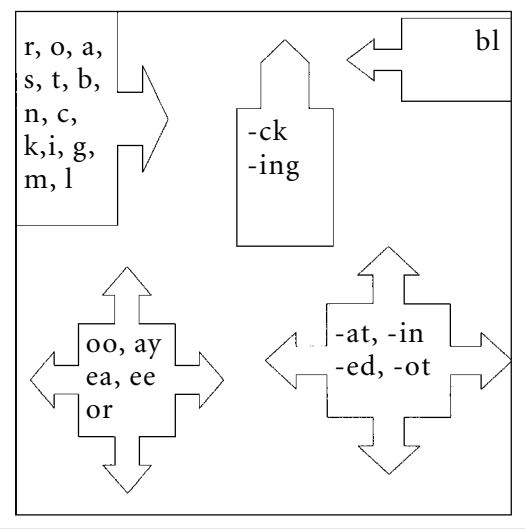
Table 2
A sample of Gordon's writing following his interview

Gordon writes:	*p*
Teacher:	What else can you write?
Gordon:	Um, about popcorn and Blackie?
Teacher:	That would be great.
Gordon writes:	*I licke Popcorn. Blackee is a black dok. I can play.*
Gordon:	How do you write *with*?
Teacher:	What sound can you hear first in *with*?
Gordon:	*W*, but I can't remember what it looks like. [Teacher writes *w*, and Gordon copies it.]
Teacher:	What sound can you hear next? [Teacher slowly segments and says *w-i*.]
Gordon:	Oh, /i/ [sound]. That's *i* [letter name]. [Gordon writes the letter *i*. He then makes the /th/ sound at the end of the word *with*. He repeats the sound several times.]
Teacher:	Do you know which letters say /th/?
Gordon:	No.
Teacher:	The sound /th/ is made by two letters together. The two letters are *t* and *h*, and when you write them together they make the sound /th/. [Gordon writes the *t*.]
Gordon:	That's a *t*, but I can't do *h*. [The teacher writes *h*, and Gordon copies it.]
Teacher:	Well done, Gordon. You have just written the word *with*. I can play with.... What else would you like to write?
Gordon:	Blackie.
Gordon writes:	*Blackee. I don't licke to read books I read abot football* [the teacher helped Gordon with the letter *f* and the word *ball* in the same manner as above] *and cooking.*

Gordon's knowledge of phonics on the basis of his performance on the Neale Analysis of Reading, Diagnostic Tutor (Neale, 1999), writing samples, and teacher-developed checklists for phonics knowledge and application has been represented graphically as a jigsaw puzzle (see Figure 1). The representation shows that he has some knowledge of single-letter names and sounds: for example, the letters (and their associated sounds) in his first name; the first two letters of the alphabet; the letters *r s*, *t*, *m*, and *l*, which are common sounds learned by emergent readers; and the letters *c*, *k*, and *i*. Gordon also has some knowledge and understanding of consonant blends. For example, when asked to provide a word beginning with *bl*, he responded, "Blackie"(the name of his dog). Gordon was able to identify and spell some words with vowel blends and phonograms (e.g., *read*, *book*, *play*, *corn*, and *see*) but had difficulty with others. For example, *field* was written as *feeld*, and *key* was written as *kee*. Finally, Gordon was able to make word families out of the endings *at*, *in*, *ed*, and *ot* and use the endings *ck* and *ing* appropriately in his writing. In order to provide a systematic program for Gordon, we needed to look further at his existing knowledge and build upon this developmentally, rather than remedially, by using the knowledge he already possessed.

Once explicit knowledge of the learner was gained, we were able to develop phonics teaching and learning strategies that suited Gordon's individual abilities, needs, and interests. The effectiveness of such strategies depended upon the relevance and interest to Gordon of various factors such as text, resources, methods of instruction, background knowledge, and prior

Figure 1
Gordon's phonics jigsaw puzzle at the beginning of the semester



experience (Watson, 1985). Table 3 shows an overview of Gordon's literacy program and reveals how, by using the Four Resources Model, strategies were balanced within Gordon's full program of literacy across a semester. For example, the code-breaker strategy "concrete cooking" embeds the strategies and activities from the phonics organizer (see Figure 2), which was developed following the interview with Gordon around his interest in food. The domain of code-breaker is addressed through the strategies of sound rhymes and use of the thematic alphabet scrapbook. These strategies target initial, medial, and final letters and sounds with particular emphasis on the letter *Pp* in the initial position.

The domain of text participant is addressed through strategies and activities that emphasize Gordon's prior knowledge, relevance for him, and his personal experiences. We discovered from the interview with Gordon that one of his favorite foods was pizza. Thus, the strategies we developed of cooking a pizza, eating a pizza, and describing orally and in writing the tastes, smells, sights, feel, and sounds of pizza are relevant to Gordon and make provisions for his prior knowledge and personal experiences. The strategies of writing a pizza recipe book, reading and using recipes to cook, writing a pizza poem, and writing and reciting a pizza rap engage Gordon in the use and purpose of different texts and genres. They all address the domain of text user. The final column in Table 3 comprises strategies that can be used within the domain of text analyst. They enable Gordon to use his strengthened literacy skills in other text media, such as computers and Internet technology for research, and to critically evaluate the health benefits of fast food—pizza in particular.

In the next five sections we describe the embedded phonics-based strategies in more detail and include examples of Gordon's polished writing to illustrate how he has been able to use targeted phonic elements. These elements are underlined for emphasis.

Thematic alphabet scrapbooks

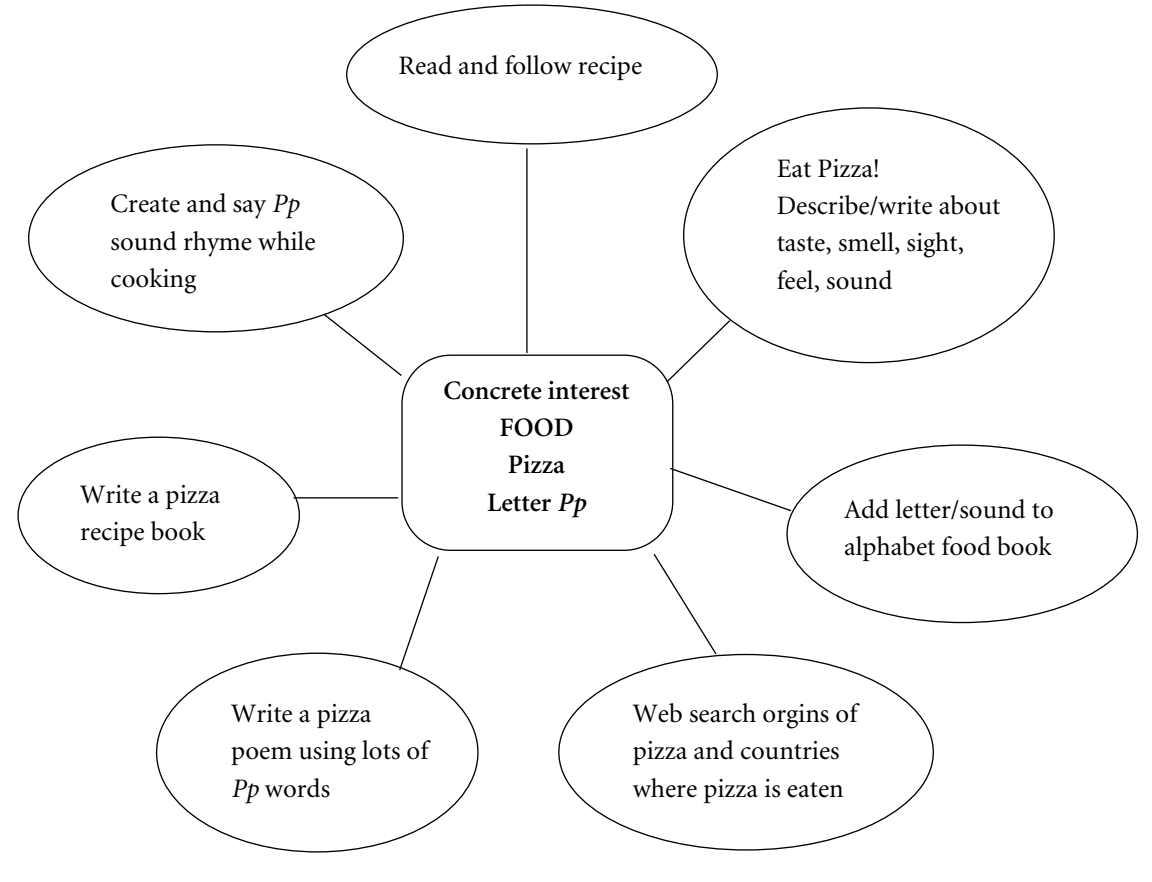
A thematic scrapbook comprises alphabetized pages labeled in alphabetical order. Pictures or photographs related to a chosen theme are selected by the learner and glued to the page that matches the initial letter/sound of the picture. The pictures or photographs are then labeled. Words related to the chosen theme can also be located and cut from magazines and glued or written on the appropriate pages. Thematic alphabet scrapbooks are made by the learners and are based on their interests. Once the activity pattern is established, the learner requires minimal teacher assistance. For example, Gordon was interested in dogs, and so pictures and words that represented aspects of dogs or looking after a dog were glued to the appropriate page or pages of his thematic alphabet scrapbook. These are some of the words that Gordon included in his scrapbook.

Table 3
Examples of phonics activities mapped onto the Four Resources Model* to develop a balanced program

Code-breaker	Text participant	Text user	Text analyst
Thematic alphabet books (unknown initial letters and sounds) Examples: *f* as in *fur*, *friend*, *fun* *p* as in *pet*, *play*, *park* *w* as in *wash*, *walk*, *whistle*	Reading alphabet book of words associated with dogs Reading *Carl's Afternoon in the Park* (Day, 1991) and *My Puppy's Record Book* (Day, 1996)	Using guide to training a dog Reading *Surprise Puppy* (Walker-Hodge, 1998) Caring for a dog Describing a dog and writing a personal recount about Blackie Reading and writing	Researching different kinds/breeds of dogs and choosing a dog for a family
Sound cards (end sounds) Examples: *-oon*, *-ch*, *-ink*, *-oke*, *-y*	Creating a book of sound words associated with family (e.g., *dad*, *mad*, *bad*, *glad*) Creating a family photo album with captions	Writing and reading different forms of rhyming poetry (e.g., limerick, ballad)	Creating an anthology of favorite read and composed poems based on a theme
Soccer sounds Examples: *h*, *f*, *p*, *w*, *j*, *v*, *sc*, *st*, *all*, *ie*, *ar*, *er*, *sh*, *a-e*, *oa*, *ou*	Reading a modified biography of David Beckham Watching the movie *Bend It Like Beckham* (Chadha, 2002) Reading a report of a soccer match Writing about being famous	Reading the rules of the game Writing a review of a movie Writing about his own soccer team Writing a report of a game he played in	Comparing a soccer player with players from other kinds of football
Concrete cooking (initial, medial, and final letters and sounds) Examples: *y*, *z*, *h*, *sh*, *sp*, *str*, *-ong*, *-y*, *ch*, *-ch*, *a-e*	Eating pizza and describing using the senses	Writing a pizza recipe book Making pizza, following recipes Writing a pizza form poem Writing a pizza rap (e.g., pizza in the pan, pizza in the pan, p-p-p-p, pizza in the pan)	Doing Web search on origins of pizza Investigating fast foods—what's healthy and what's not
Location letter looting (initial sounds and blends) Examples: e, *j*, *y*, *w*, *z*, *f*, *h*, *cl*, *dr*, *th*, *sw*, *sh*, *sl*, *sk*, *fr*, *tr*, *ou*, *au*, *air*, *er*, *ang*, *igh*	Observing in the community, at the theater, at soccer, in the home Writing a community newsletter	Writing signs or posters for community, at theater, at soccer, in the home Writing a community newsletter	Investigating television advertisements and making own TV advertisements

* (Freebody & Luke, 1990; Luke & Freebody, 1997)

Figure 2
Phonics organizer



Bb: *Blackie, black, bark, ball, bone, bathtub, best, big*
Cc: *catch, cute, come*
Dd: *dog*
Ff: *football, friend, funny, fur*
Gg: *games, guards, good*
Ll: *Labrador* [accompanied by a photo of Blackie], *like, love*
Pp: *pet, pat, play, park, paw*
Ww: *wash, whistle, walk*

Ideas, words, and pictures from the scrapbook were then used to support, scaffold, and stimulate writing. Here is Gordon's description of Blackie.

My pet By Gordon
My pet is a big dog. He has black fur. His name is Blackie. He is a labrador. My pet likes to eat bones and go for walks. I wash him in the bathtub. I play games with him at the park. He can catch a football. He comes when I whistle. He is a good guard dog. He is funny and cute. Blackie is my best friend.

Sound cards (end sounds)

Sound cards represent final or end sounds in words. These can be used in a variety of activities and games—for example, sorting, grouping and matching activities, and games such as memory and bingo. The cards contain words that target matching end sounds. The end sounds are highlighted in a separate color. Some of Gordon's target end sounds are shown here in boldface type.

-oon: *moon*, *balloon*, *noon*, *afternoon*
-ch: *lunch*, *hunch*, *crunch*, *munch*
-ink: *drink*, *sink*, *stink*, *pink*
-oke: *smoke*, *coke*, *bloke*, *woke*
-y: *happy*, *sorry*, *holly*, *footy*

The cards were then used to support, scaffold, and stimulate writing. Here is Gordon's recount of a family photo that was scaffolded by the sound cards together with oral language about the photo.

My family photo
By Gordon

This is a photo of my family. The photo was taken at Christmas time in the afternoon. Mum, Dad, Blackie, and I are in the photo. We are sitting under the jacaranda after Christmas lunch. There are balloons and holly in the tree. We had a BBQ with pink prawns and salad. I had Coke to drink with it. It was such a good day but I ate too much. I like the photo because I feel happy and I think it is good to be happy.

Soccer sounds

Soccer sounds are related to the theme of soccer, which is one of Gordon's keen interests. Bright displays are created with the learners to highlight sounds and words associated with their chosen interest. For example, with Gordon, cardboard cutouts of soccer-related items such as balls, boots, shin pads, and goals were made. Words and phrases associated with soccer were brainstormed and listed on the cutouts, with the targeted letters/sounds within the words highlighted. They were then displayed in the classroom. For Gordon, the sounds targeted as his soccer sounds extended beyond those with which he was already familiar (see Figure 1). For example, they included *h*, *f*, *p*, *w*, *j*, *-y*, *v*, *sc*, *st*, *all*, *ie*, *ar*, *er*, *sh*, *a-e*, *oa*, and *ou*. These sounds were then embedded within words and phrases related to soccer and displayed as "Gordon's Soccer Sounds."

Here are some of Gordon's words with soccer sounds boldfaced: *soccer*, *balls*, *scoring*, *field*, *penalty*, *David Beckham*, *famous*, *soccer star*, *achievement*, *winning*, *World Cup*, *goals*, *English*, *job*. The soccer sounds, words, and displays were then used to support, scaffold, and stimulate writing. For example, here is Gordon's narrative, which was written with the assistance of the soccer sounds display.

If I were famous
By Gordon

If I were famous my name would be David Beckham. My job would be soccer star for the English soccer team. I would be good at kicking the ball and scoring goals. My famous achievement would be winning the World Cup.

This activity can easily be adapted to a range of individual interests (e.g., sport sounds, animal sounds, shopping sounds, and food sounds).

Concrete cooking (initial, medial, and final letters and sounds)

Concrete cooking refers to the use of concrete materials based upon the learners' interests. The learners' familiarity and expertise with their concrete interests can be used to promote links between existing and new knowledge as learning extends to phonics and other areas of literacy. (See Figure 2 and Table 3.) For Gordon, food and cooking were real-world interests. The activity of making a pizza, together with the associated literacy activities, was used to extend his knowledge of letters and sounds and to use these effectively in his writing.

Following is a form poem that was written by Gordon after the concrete activity of making a pizza. A form poem is a collection of words about a chosen theme. It comprises four lines. The first and third lines contain four words each, and the second and fourth lines each contain three words. Using a brainstorming strategy to list words about pizza assisted Gordon's writing. New letters/sounds that were targeted throughout the concrete-cooking activities were highlighted and included *y*, *z*, *h*, *sh sp str*, *-ong*, *-y*, *-ch*, *ch*, and *a-e*. The structure of the poem was outlined on an activity scaffold. Gordon read and selected his

Figure 3
Example of location letter looting

Club Kangaroo Newsletter
By Gordon

I am the chairperson at our meetings. I organize activities as well.

Camp

In August we are going on our yearly camp to Hill's End. My mum is going to drive us there by bus. All Club Kangaroo will be going. We will do drama, disco dancing, and hiking. We will walk on the beach. We have done lots of things this year.

Movie trip

We went to see *Bruce Almighty*. I gave it 10 out of 10. I liked it.

Amazons

We went on an outing to Amazons. There was swimming and water slides. David was funny standing in the showers being a gorilla. We had a BBQ. I gave it 10 out of 10 because it was good fun, good friends, and good food!

Trip to the theater

We saw *Fame*. We went on Saturday. I like the show. There was singing and dancing. I gave it 10 out of 10. It was very good.

brainstormed words from the chalkboard and wrote these onto the poetry scaffold. The written scaffold was then edited and published, using a word-processing program on the computer. The printed edition was read by Gordon to the rest of the class, displayed on a notice board, and included in a poetry anthology.

Gordon's pizza shop
A form poem by Gordon

Yummy tasty pizza good
Makes you strong
Spinach ham tomato cheese
Gordon's pizza shop

Location letter looting (initial sounds and blends)

Learners are given a printed sheet containing their target letters/sounds. Location letter looting involves going into a chosen location containing print (e.g., a shopping center, cinema, theater, amusement park, or library) and finding words that contain the learner's target letters/sounds. These words are copied in a space next to the target letters/sounds by the learner. In a location-letter-looting activity undertaken at his youth group, Gordon's target letters/sounds included *e*, *j*, *y*, *w*, *z*, *f*, *h*, *cl*, *dr*, *th*, *sw*, *sh*, *sl*, *sk*, *fr*, *tr*, *ou*, *au*, *air*, *er*, *ang*, and *igh*. Figure 3 is an example of how Gordon used the words and sounds that he found to assist him in writing a newsletter for Club Kangaroo.

Gordon's progress

Gordon began the program with knowledge of the names and single sounds of 14 letters of the alphabet. There was evidence that he was beginning to use these in his writing (see Table 2). Gordon had limited knowledge and application of consonant blends, word endings, and phonograms. Such phonics knowledge when represented as a jigsaw puzzle revealed a random scattering of pieces without cohesion (Figure 1). By addressing the three strategies of getting to know Gordon and his needs and interests, being able to motivate him with approaches and activities that were relevant to him, and using multiple approaches and activities in a literacy program framed by the Four Resources Model, we were able to strengthen and extend his phonics knowledge and application in other areas of literacy to more fully complete his phonics jigsaw puzzle. At the end of the semester Gordon's jigsaw puzzle revealed an almost complete knowledge and application of the names and sounds of the letters of the alphabet (Figure 4). His knowledge and application of consonant blends, word endings, and phonograms was greatly extended and strengthened.

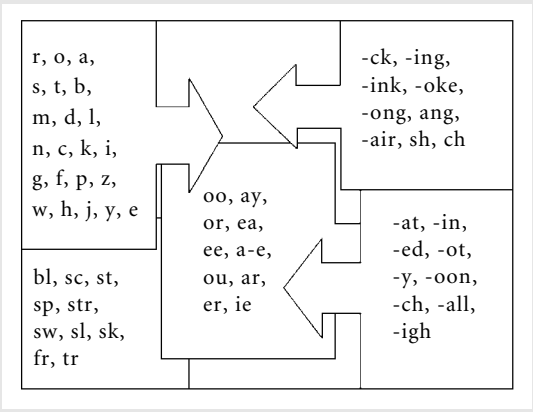
The pieces of his puzzle were no longer randomly scattered but showed cohesion.

Meeting the challenge

Phonics instruction is an important literacy component for all learners. Research has shown that learners who are successful code-breakers will be more likely to become successful readers who participate in reading and engage with text in meaningful, purposeful ways. The challenge for teachers of learners with intellectual disabilities lies in integrating contemporary understandings about literacy practices into a balanced literacy program. Three key strategies to meet this challenge have been identified. They are knowing the learner; motivating the learner; and using multiple strategies and activities in phonics instruction that cater to individual abilities, needs, interests, and learning preferences.

Crucial to Gordon's progress has been to work developmentally with his strengths and interests. To aid this approach, we adopted the Four Resources Model. It enabled us to focus on Gordon's needs, interests, and learning preferences and to meet the challenge of providing effective phonics instruction for him within a balanced literacy program. We believe that the principles underpinning these strategies provide teachers with a powerful model that can be used to plan integrated phonics activities in a wider range of educational contexts and with learners of diverse abilities.

Figure 4
Gordon's phonics jigsaw puzzle at the end of the semester



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